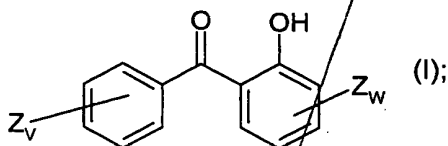


Claims

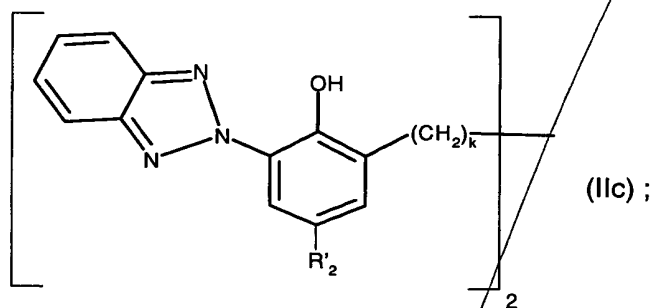
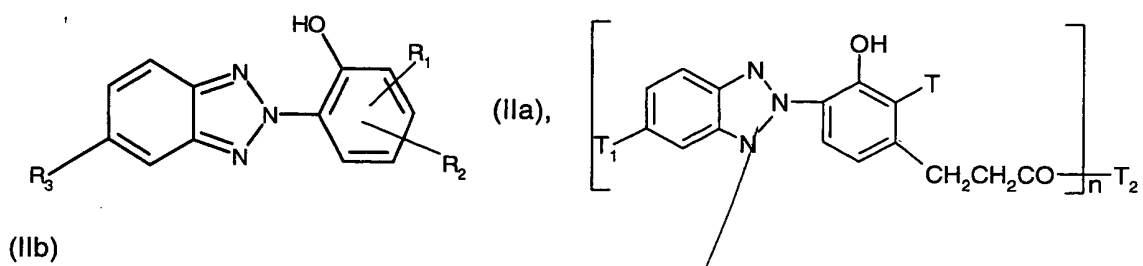
1. A polyolefin composition which comprises as UV absorber a mixture of
 - a) at least one hydroxybenzophenone and at least one 2-hydroxyphenylbenzotriazole with the proviso that the polyolefin is a high density polyethylene of the "Phillips" type or a polyethylene of the metallocene type;
 - b) at least one hydroxybenzophenone and at least one 2-hydroxyphenyltriazine, with the proviso that if the polyolefin is polypropylene, no polyvinylpyridin is present
 - c) at least one hydroxybenzophenone and at least one oxanilide;
 - d) at least one 2-hydroxyphenylbenzotriazole and at least one oxanilide;
 - e) at least one 2-hydroxyphenyltriazine and at least one oxanilide;
 - f) at least one hydroxybenzophenone, at least one 2-hydroxyphenylbenzotriazole and at least one oxanilide;
 - g) at least one hydroxybenzophenone, at least one oxanilide and at least one 2-hydroxyphenyltriazine; or
 - h) at least one 2-hydroxyphenylbenzotriazole, at least one oxanilide and at least one 2-hydroxyphenyltriazine.
2. A polyolefin composition according to claim 1 wherein the polyolefin is polyethylene or polypropylene.
3. A polyolefin composition according to claim 1 wherein the hydroxybenzophenone is of formula I



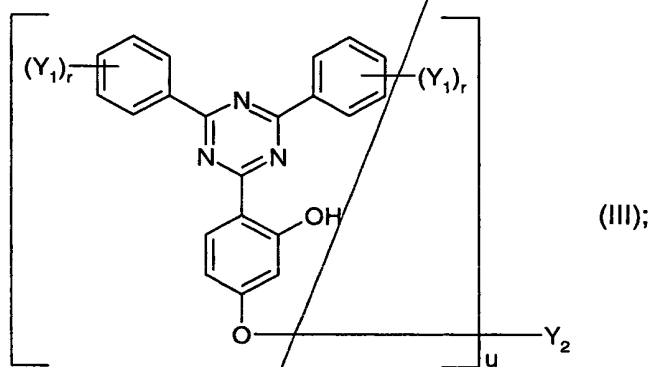
the 2-hydroxyphenylbenzotriazole is of formula IIa, IIb or IIc

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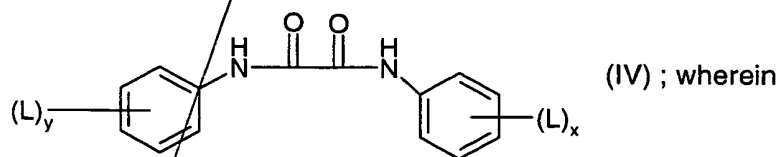
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the 2-hydroxyphenyltriazine is of formula III

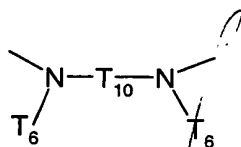


and the oxanilide is of formula (IV)

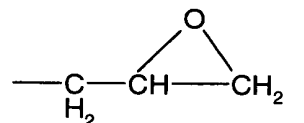


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$$\text{---N} \begin{matrix} \nearrow T_4 \\ \searrow T_5 \end{matrix} \quad \text{and,}$$

[illegible]

T₃ is hydrogen, alkyl which has 1 to 18 carbon atoms and is unsubstituted or substituted by 1 to 3 hydroxyl groups or by -OCOT₆, alkyl which has 3 to 18 carbon atoms, is interrupted once or several times by -O- or -NT₆- and is unsubstituted or substituted by hydroxyl or -OCOT₆, cycloalkyl which has 5 to 12 carbon atoms and is unsubstituted or substituted by hydroxyl and/or alkyl having 1 to 4 carbon atoms, alkenyl which has 2 to 18 carbon atoms and is unsubstituted or substituted by hydroxyl, phenylalkyl having 1 to 4 carbon atoms in the



T₄ and T₅ independently of one another are hydrogen, alkyl having 1 to 18 carbon atoms, alkyl which has 3 to 18 carbon atoms and is interrupted once or several times by -O- or -NT₆-, cycloalkyl having 5 to 12 carbon atoms, phenyl, phenyl which is substituted by alkyl having 1 to 4 carbon atoms, alkenyl having 3 to 8 carbon atoms, phenylalkyl having 1 to 4 carbon atoms in the alkyl moiety or hydroxyalkyl having 2 to 4 carbon atoms,

T₆ is hydrogen, alkyl having 1 to 18 carbon atoms, cycloalkyl having 5 to 12 carbon atoms, alkenyl having 3 to 8 carbon atoms, phenyl, phenyl which is substituted by alkyl having 1 to 4 carbon atoms, phenylalkyl having 1 to 4 carbon atoms in the alkyl moiety,

T₇ is hydrogen, alkyl having 1 to 18 carbon atoms, phenyl which is unsubstituted or substituted by hydroxyl, phenylalkyl having 1 to 4 carbon atoms in the alkyl moiety, or -CH₂OT₈,

T₈ is alkyl having 1 to 18 carbon atoms, alkenyl having 3 to 8 carbon atoms, cycloalkyl having 5 to 10 carbon atoms, phenyl, phenyl which is substituted by alkyl having 1 to 4 carbon atoms, or phenylalkyl having 1 to 4 carbon atoms in the alkyl moiety,

T₉ is alkylene having 2 to 8 carbon atoms, alkenylene having 4 to 8 carbon atoms, alkynylene having 4 carbon atoms, cyclohexylene, alkylene which has 2 to 8 carbon atoms and is interrupted once or several times by -O-, or a radical of the formula -

$$\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OT}_{11}\text{OCH}_2\text{CH}(\text{OH})\text{CH}_2\text{- or -CH}_2\text{-C}(\text{CH}_2\text{OH})_2\text{-CH}_2\text{-,}$$

T₁₀ is alkylene which has 2 to 20 carbon atoms and can be interrupted once or several times by -O-, or cyclohexylene,

T₁₁ is alkylene having 2 to 8 carbon atoms, alkylene which has 2 to 18 carbon atoms and is

6. A polyolefin composition according to claim 3, in which, in the compounds of the formula

$$\begin{array}{c} \text{---N} \begin{array}{l} \nearrow T_4 \\ \searrow T_5 \end{array} \end{array}$$
$$\begin{array}{c} \diagup \quad \diagdown \\ \text{N} - \text{T}_{10} - \text{N} \\ \diagdown \quad \diagup \\ \text{T}_6 \quad \text{T}_6 \end{array}$$

SUB

 a_1

9. A polyolefin composition according to claim 8, in which Y₁ is methyl and Y₂ is an octyl radical or alkyl which has 1 to 3 carbon atoms and is substituted by hydroxyl, alkoxy having 13 or 15 carbon atoms, -COOY₈ and/or -OCOY₁₁, Y₈ being a decyl or octadecenyl radical or alkyl which has 7 carbon atoms and is substituted by hydroxyl and interrupted by an oxygen atom, and Y₁₁ being propenyl.

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a7

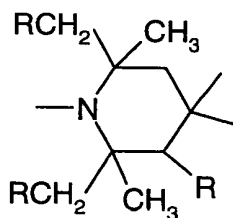
10. A polyolefin composition according to claim 3, in which, in the compounds of the formula (I), v and w independently of one another are 1 or 2 and the substituents Z independently of one another are hydrogen, halogen or alkoxy having 1 to 12 carbon atoms.

11. A polyolefin composition according to claim 3, in which, in the compounds of the formula (IV), x and y are 1 or 2 and the substituents L independently of one another are hydrogen or alkyl having in each case 1 to 12 carbon atoms.

12. A polyolefin composition according to claim 1 wherein the amount of the individual UV absorber in the mixture is from 20% to 80% based on the weight of the mixture, with the proviso that the sum adds to 100%.

13. A polyolefin composition according to claim 1 wherein the total amount of UV-absorber is from 0.005 to 5% based on the weight of the polymer.

14. A polyolefin composition according to claim 1, which additionally contains at least one sterically hindered amine, in particular an amine of this type containing at least one radical of the formula



in which R is hydrogen or methyl.

15. The use of a mixture of UV-absorbers according to claim 1 for the stabilization of polyolefins.